

Amendments to the Claims:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

Listing of Claims:

1 - 5 (cancelled)

6. (currently amended) In a plasma processing method using a vacuum processing chamber, a sample table for mounting a sample which is processed in said vacuum processing chamber wherein the sample is an electrically insulating film, and a plasma generation means, wherein a plasma processing is carried out by generating a plasma in response to introduction of a gas which contains at least carbon and fluorine, and a gas species is generated which contains a carbon and fluorine according to a plasma dissociation, the plasma processing method comprising the steps of:

generating a plasma, wherein said plasma generation is effected using an electron cyclotron resonance system in which a microwave having a frequency of from 300 MHz to 1 GHz is employed and wherein a degree of plasma dissociation is an intermediate degree and said gas species containing carbon and fluorine is generated fully in the plasma, and controlling a temperature of a region which forms a side wall of said vacuum processing chamber ~~to have~~ be in a range of 10 °C to 120 °C.

7. (previously presented) A plasma processing method according to claim 6, wherein

said plasma generation produces a plasma in which an electron energy is a range of from 0.25 eV to 1 eV.

8. (cancelled)

9. (currently amended) A plasma processing method according to claim 6, wherein

in said plasma generation, a drive of a plasma ~~existing~~exciting power supply is carried out intermittently.

10. (currently amended) A plasma processing ~~apparatus~~method according to Claim 6, Claim 7 or Claim 9, wherein as a means for adjusting a temperature of said vacuum wall, a temperature adjusted coolant medium is used.

11. (new) A plasma processing method according to Claim 6, wherein said temperature of the region which forms the side wall of said vacuum processing chamber is controlled to have a temperature in a range of 30° to 50° C.

12. (new) A plasma processing method according to Claim 6, wherein a temperature control accuracy of said side wall, in said controlling, is  $\pm 5^\circ \text{C}$ .

13. (new) A plasma processing method according to Claim 6, wherein said plasma processing method is an etching method of the sample.

14. (new) A plasma processing method according to Claim 13, wherein said sample has an oxide surface, and during said etching method the oxide surface is etched.

15. (new) A plasma processing method according to Claim 13, wherein a distance between electrodes in the plasma processing chamber is 50-100 mm.

16. (new) A plasma processing method according to Claim 6, wherein a distance between electrodes in the plasma processing chamber is 50-100 mm.